Next level conveyor performance
Voith BeltGenius ALEX

Voith BeltGenius is the product family that is used for monitoring, benchmarking and optimization of belt conveyors and conveying systems. Now, mines can get a complete picture of their system’s performance with our intelligent sensor and software technologies. You can reduce maintenance frequency, unexpected downtime and total material transport costs considerably. Furthermore, Voith BeltGenius is also helping mines reduce their CO₂ footprint.
Measurement procedure
BeltGenius ALEX, which stands for Alignment Expert, consists of a dual sensor chain. The sensors are mounted to both belt edges during the data recording procedure, which is conducted by Voith service engineers. The 3D sensors detect any misalignment of individual idlers, garlands, or specified idler racks. The result of the first run is a report that provides clear adjustment recommendations for accurate positioning. Implementing the recommended measures leads to significant wear reduction, efficiency improvements and uptime. The verification run provides a benchmark report on the level of improvement as well as an analysis of the overall benefits achieved.

Belt guidance
The stability of the belt alignment is the key to achieving sustainable and economic bulk material transportation. Operators have effective methods of fighting belt misalignment, but the result is not always as efficient as it could be. Following recommendations from BeltGenius ALEX eliminates the steering forces of tilted idler stations efficiently, avoiding belt skewing and, consequently, belt damage, material spillage, and unexpected downtime as well.
Features
- Belt alignment tracking
- Sensor-based alignment detection of idlers and frames
- Clear instructions to eliminate root causes
- Dual-sensor chain on both belt edges
- Fast on-site service by Voith

Benefits
+ Intelligent analytical system to identify ways to improve
+ Verification of alignment correction included
+ Failure prediction capability avoids unexpected down-time
+ Extends service life of belt
+ Increases service life of idlers by as much as 20%
+ Potential energy efficiency gains of more than 10% from reduced friction losses
+ Significant and sustainable reduction of bulk material transportation costs

Process steps
- Conveyor and system analysis
- 1st Sensor run and report generation
- Alignment work by customer
- 2nd Sensor run and final report